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# Early cumulative caregiver sensitivity and its relationship with children's later perceptions of peer and maternal acceptance

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**EARLY CUMULATIVE CAREGIVER SENSITIVITY AND ITS RELATIONSHIP WITH  
CHILDREN'S LATER PERCEPTIONS OF PEER AND MATERNAL ACCEPTANCE**

Submitted to the Graduate Faculty of the  
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by  
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## **ABSTRACT**

The study examined the possibility of relationships between caregiver sensitivity across multiple caregivers during the child's first three years of life and both children's later perceived peer acceptance and children's later perceived maternal acceptance. Data were collected from 26 children, aged between 5 and 8-years old, and the 32 unique caregivers that the children had experienced during their first 36 months in child care. Assessments were made using the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (PSPC, Harter & Pike, 1984) and the Caregiver Interaction Scale (CIS, Arnett, 1989). Correlations were calculated among the 7 primary variables for the children: number of unique caregivers, number of snapshots (i.e., points of time at which caregiver data was collected), age in months at testing, peer acceptance, maternal acceptance, average level of caregiver sensitivity, and rate of change of caregiver sensitivity. Significant positive correlations were found between perceived peer acceptance and perceived maternal acceptance. No statistically significant relationships were found among the remaining variables; that is, the measures of cumulative caregiver sensitivity did not predict the children's later perceptions of peer acceptance or of maternal acceptance. Possible explanations for the absence of statistically significant relationships are discussed.

## **CHAPTER 1. INTRODUCTION**

### **1.1 Statement of the Research Problem**

Accumulated evidence suggests that caregiver sensitivity has an important influence on the development of young children who are in child care outside the home, especially on their socioemotional development (Lamb, 1998; NICHD-ECCRN, 2005, 2007; Peisner-Feinberg et al., 2001; Sroufe, Egeland, Carlson, & Collins, 2005). High quality child care, an important component of which is the caregiver's sensitivity, is related to more positive mother-child relationships (e. g., Marshall, 1991), increases in children's ability to be more sociable (e. g., Kontos, 1994), more positive peer interactions in school (e. g., Elicker & Fortner-Wood, 1995), and the control of children's general emotional and behavioral functioning (e. g., NICHD-ECCRN, 2005; Peisner-Feinberg et al., 1999).

In addition to the quality of caregiver sensitivity, the amount of time spent in child care (NICHD-ECCRN, 2005) and the stability of the care arrangements are related to the socioemotional development of young children. Early, increased, and continuous time spent during the infancy and toddler years in nonmaternal child care is related to poorer socioemotional adjustment (NICHD- ECRN, 2005). The continuity of children's care arrangements generally refers to the extent to which young children interact with one or multiple caregivers. When exposed to multiple caregiver interactions, young children are more likely to be socially withdrawn or aggressive with peers (Howes & Hamilton, 1992), and more likely to be insecurely attached (Suwalsky, Zaslow, Klein, & Rabinovitch, 1986).

### **1.2 Rationale for the Study**

We are interested in caregiver sensitivity because young children's later social and emotional development seems to be greatly influenced by the quality of caregiver sensitivity during their earliest years. A large body of scientific research has established a strong relationship between high levels of early caregiver sensitivity and more socioemotionally competent children (Lamb, 1998; NICHD-ECCRN 2005, 2007; Peisner-Feinberg et al., 1999; Sroufe, 2005) but little is known about the cumulative effects of varying degrees of caregiver sensitivity. The current study explored the possibility of a relationship between caregiver sensitivity across multiple caregivers during the child's first three years of life, and young

children's later socioemotional development, specifically their perceptions of acceptance by their mothers and their peers.

### **1.3 Theoretical Framework**

The theoretical framework for the current study is drawn from Bowlby (1982) and Ainsworth's (1978) attachment theory. One of the foundational elements of attachment theory is the relation between the child's sense of security and the caregiver's sensitivity and responsiveness. A sense of security is associated with higher levels of child participation in various activities, and more reciprocity, safety, and protection during caregiver-child interactions (NICHD-ECCRN, 2005). For example, in studies of maternal caregiving, the mothers of young children with a low level of security display greater caregiving stress and manage responsiveness with greater difficulty (Scher & Mayseless, 2000). The mothers of disorganized children – an extreme category of insecurity - display higher levels of depression, and rarely respond to young children affectionately (Hesse & Van IJzendoorn, 1998).

### **1.4 Objectives**

The purpose of this study was to investigate the relationship between the sensitivity of young children's multiple caregivers during the children's infant and toddler period and the children's later perceptions of perceived peer acceptance and the sensitivity of young children's multiple caregivers during the children's infant and toddler period and the children's later perceptions of perceived maternal acceptance. The study looked at measures of caregiver sensitivity up to the target child's third birthday and determined if caregiver sensitivity was related to the child's self-perception measures that were collected in grade school. It was expected that there would be a positive high relationship between caregiver sensitivity in the first three years and later perceptions of peer and maternal acceptance.

### **1.5 Hypotheses**

The hypothesis for the study was that early elementary school-age children's perceptions of peer and maternal acceptance are related to the cumulative caregiver sensitivity that they experienced during their first three years of life.

## 1.6 Limitations

1. The sample is limited to participants in the BRECES study with whom the researchers were able to maintain contact.
2. The sample is relatively small, and therefore the statistical power is low. Small differences between groups were unlikely to be revealed.
3. The caregiver sensitivity measure that was used is a general measure of sensitivity; that is, caregiver sensitivity was measured while the caregiver interacted with all the young children and therefore was not particular to any one young child.
4. The results were derived from data that were collected to measure the young children's interactions with caregivers only up to the child's third birthday, and are therefore limited in application to children three years of age and younger.

The primary constructs and their definitions are presented in Table 1.

Table 1

Constructs and Definitions of Primary Variables

Constructs	Definitions
Caregiver Sensitivity	Caregivers respond differently to young children's signals. Caregiver sensitivity indicates how well caregivers read and respond to young children's cues.
Perceived Maternal Acceptance	Some children perceive their mother to be more accepting than others. Perceived maternal acceptance indicates the degree to which a young child perceives acceptance by his or her mother.
Perceived Peer Acceptance (table 1 cont'd)	Perceived peer acceptance indicates the degree to



(table 1 cont'd)

which young children perceive social acceptance by their peers. It includes the ease with which young children perceive their ability to initiate and maintain satisfactory peer relationships.

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*Note:* The definitions in Table 1 are drawn from Harter (1999).

### **1.7 Assumptions**

1. The data that measure caregiver sensitivity are valid and reliable.
2. The data that measure perceived peer acceptance and perceived maternal acceptance are valid and reliable.
3. Although the data that were collected to measure each caregiver's level of sensitivity present a measure of the caregiver's general sensitivity traits, they are believed to be applicable across both children and time.

## **CHAPTER 2: REVIEW OF LITERATURE**

A large and increasing body of scientific research has found many connections between young children's experiences in child care and their later social and emotional development. Among the many characteristics of the child care experience, quality, amount of time spent in child care, and continuity of care arrangements have been the most studied. The history and current status of the research in each of these areas will now be described.

### **2.1 Relationship among Specific Aspects of Child Care Experiences and Socioemotional Development: Quality, Amount of Time, and Continuity**

#### **2.1.1 Quality**

High quality child care experiences have been found to predict many socioemotional outcomes in young children, including higher rates of positive outcomes and lower rates of negative outcomes (NICHD-ECCRN, 2005; Peisner-Feinberg et al., 1999; Phillips, McCartney, & Scarr, 1987). Cryer (1999) defined child care quality as care that not only meets the young children's wellbeing and needs, but that also provides developmentally appropriate motivation, sensitivity, and encouragement to make positive relationships with their peers.

High-quality caregiver sensitivity is believed to be analogous to high-quality maternal sensitivity. High-quality child care experiences are related to such specific socioemotional outcomes as the mother-young child relationship and peer relationships. High-quality child care arrangements are associated with more positive mother-child relationships (Marshall, 1991). When young children are involved in social play with their mothers, they tend to be happy (Izard et al., 1995). When mothers cooperate with their young children and then suddenly become unemotional and insensitive, their young children tend to be sad or distant (Tronick, Cohn, & Shea, 1986). The quality of the mother-child relationship predicts young children's later social competence (Main, Kaplan, & Cassidy, 1985). Sensitive mothers are more involved in caregiving, and thus, they are more likely to influence their young children's social life (Parke & Ladd, 1992). The attachment security between the mother and her young child in infancy may predict the attachment security between the mother and her young child in preschool (Howes & Hamilton, 1992).

Young children who receive high-quality child care tend to be more sociable than young children who receive low-quality child care (Kontos, 1994; Peisner-Feinberg et al., 1999; Volling & Feagans, 1995), to develop more positive peer relationships in school (Elicker & Fortner-Wood, 1995), and to be more cooperative even with unknown peers (Clarke-Stewart, Gruber, and Fitzgerald, 1994). Volling and Feagans (1995) found that socially-insecure young children develop more positive relationships with their peers when they receive high-quality care, but they fail to develop such abilities when they receive low-quality care. Caregivers assume that young children tend to be more sociable and show more exploratory behaviors when caregivers interact more verbally with their young children, play with them, and respond quickly to their needs (Phillips et al., 1987). High-quality child care, in comparison with low-quality child care, tends to increase young children's capability to control their emotional and behavioral performance, thus displaying better peer relationships and less misbehavior (Elicker and Fortner-Wood, 1995; NICHD-ECCRN, 2005; Peisner-Feinberg et al., 1999).

Cryer (1999) suggests that there are two different types of quality to consider when evaluating the quality of early childhood education programs: process quality and structural quality. Process quality consists of the dynamic factors that young children experience personally including caregiver-child interactions, child-child interactions, the daily schedule, the materials available to the children, and how everyday personal care routines are handled (Peisner-Feinberg & Burchinal, 1997). Structural quality consists of the static factors that are argued to allow process quality to occur, including group size, caregiver-child ratio, and the education level, specialized training, and experience of the caregivers. An important component of process quality is caregiver sensitivity. According to Ainsworth (1970), a sensitive caregiver

responds socially to [the child's] attempts to initiate social interaction, playfully to his attempts to initiate play. She picks him up when he seems to wish it, and puts him down when he wants to explore. When he is distressed, she knows what kinds and degree of soothing he requires to comfort him – and she knows that sometimes a few words or a distraction will be all that is needed. On the other hand, the [caregiver] who responds inappropriately tries to socialize with the baby when he is hungry, play with him when he is tired, or feed him when he is trying to initiate social interaction (Ainsworth, quoted in Sroufe, 2005, p. 58).

### 2.1.2 Amount of Time and Timing

In addition to general quality, the amount of time that children spend in child care (NICHD-ECCRN, 2005) can also influence young children's socioemotional development. When the amount of time spent in child care is more than 20 hours per week, the mother-child attachment relationship is more likely to be insecure (NICHD-ECCRN, 2005). The mother-child insecure relationship may be a consequence of the quantity of care (more than 20 hours per week) and the children's socioemotional adjustment (NICHD-ECCRN, 2005). The NICHD-ECCRN (2005) study shows that more time in care predicts less harmonious mother-infant interactions, and less sensitive mothering at 6, 15, 24, and 36 months of age.

Early entrance into child care settings is associated with poorer socioemotional development in young children. Examples of poor socioemotional development include higher rates of aggression, disobedience, protest, detachment, avoidance, hostility, negativism, violence, as well as child-adult conflicts in the preschool years and poor peer adjustment (Belsky, 2001; van IJzendoorn et al., 2004; NICHD - ECCRN, 2005).

Although an extensive amount of time in child care has been found to have some negative effects on young children, it tends to be beneficial for low-income children's socioemotional development, unless it was of low quality as will be mentioned in the *Special Populations* section. Extensive amounts of time in high quality child care for children from low-income families seem to increase their socioemotional development by reducing problem behaviors (Votruba-Drzal, Coley, & Chase-Lansdale, 2004).

- **Special Populations.** High-quality child care, with high levels of caregiver sensitivity, tends to be especially beneficial for the socioemotional functioning of young children from special populations. The special populations that have been identified include low-income families (Campbell, Ramey, Pungello, Sparlin, & Miller-Johnson, 2002; NICHD-ECCRN, 2005; Peisner-Feinberg et al., 2001; Reynolds, 2000; Votruba-Drzal, Coley, & Chase-Lansdale, 2004), families with mothers with a low level of education (Peisner-Feinberg et al., 2001), ethnic minority families, and single-parent families (NICHD-ECCRN, 2005).

- **Gender Differences.** High-quality child care tends to have different effects on the two genders. Child care quality has been found to be especially important for boys' social and behavioral development, perhaps because of gender differences in same-sex peer groups. All young children tend to interact socially in same sex peer groups (Maccoby, 1998). Boy groups have a tendency to be involved in play with higher levels of conflict and with less supervision by caregivers. On the other hand, girl groups have a tendency to be involved in play with higher levels of cooperation and with closer supervision by caregivers (Maccoby, 1998). Boys are more reactive to stress than girls (Crockenberg, 2003; Dettling, Parker, Lane, Sebanc, & Gunnar, 2000) and therefore high-quality care with greater caregiver sensitivity may support boys' social and behavioral development to a greater degree because it offers greater supervision by caregivers and less conflict (Votruba-Drzal et al., 2004).

### **2.1.3 Continuity of Care**

Continuity of care is another characteristic of child care that has been linked to young children's socioemotional development. Continuity of care means that "infants and toddlers remain with the same teacher(s) during a significant part, if not all, of their first years in the program," especially the first three years (Cryer, Hurwitz, & Wolery, 2000). The National Association for the Education of Young Children (NAEYC) states that in young child care settings of high-quality, "... every attempt is made to have continuity of adults who work with children, particularly infants and toddlers" (NAEYC, 1991, p. 40). Young children need a lot of time to get attached to their caregivers, and thus they may not form secure attachments if their caregivers are frequently changed (Raikes, 1993). Attachment theory confirms the importance of continuity of care for the increase of socioemotional development of young children (Jacobson & Wille, 1986). When young children experience multiple caregivers they tend to be insecure (Suwalsky et al., 1986) and have fewer opportunities to make stable and close relationships with their caregivers (Howes & Stewart, 1987; Suwalsky et al., 1986). They are socially withdrawn or aggressive with

their peers and less competitive with their peers (Howes & Stewart, 1987) probably because the known caregiver has been replaced by the unknown caregiver with different habits (Howes & Hamilton, 1992).

#### **2.1.4 Parents**

Caregiving style may be analogous to parenting style in terms of its relationship with young children's outcomes. Variations in parenting styles might be related to maternal depression. Maternal depression may be related to less maternal sensitivity, grief, bad temper, and emotional withdrawal (Campbell, Cohn, & Meyers, 1995). The consequences of maternal depression are likely to be more obvious when children are very young, probably because at that age children need more nurturance, encouragement, and assistance from their caregivers (Cummings & Cicchetti, 1990). The children of depressed mothers display higher levels of negative depressed social behavior (they are introverted and nonreceptive), less mutuality when they cooperate both with their mothers and with their peers (Teti & Gelfand, 1991), and lower levels of self-confidence (van IJzendoorn, Goldberg, Kroonenberg, & Frenkel, 1992). It has been suggested (NICHD-ECCRN, 2005) that more hours spent in high quality child care might diminish the negative effects of maternal depression on children. More hours in high quality care may provide depressed mothers with greater social support, guidance, and advice (Colleta, 1981), improve the mother's capacity to interact sensitively with their child, and provide relief from daily stressors (Harwood, 1988) and thus they may become more emotionally available to their children and more attached to their child (Cohn, Campbell, & Ross, 1991). Alternatively, many hours in child care may provide the children of sensitive or skilled parents with poorer rearing experiences, leading to more problem behaviors (Greenstein, 1993).

The causes of parents' insensitivity may also be analogous to the causes of caregivers' insensitivity. Parents who believe that their young children have misbehaved on purpose tend to rely on a punitive response in comparison with parents who believe that their young children have not intended to misbehave (Dix, Ruble, & Zambarano, 1989).

Parents who depend on authoritarian, that is punitive, restrictive, and harsh disciplinary behaviors, tend to have children who are inhibited and nervous (Baumrind, 1967), frustrated and irritated (Cryan, 1987), disobedient (Olson, Bates, & Bayles, 1984), and violent, unfriendly, or aggressive (Clarke-Stewart,

1987). Parents who rely on authoritarian disciplinary behaviors, especially induction, tend to have children who are highly competent, self-confident, and respectful (Baumrind, 1977). Parents who are abusive tend to have children who are violent or reserved (Rogosch & Cicchetti, 1994). Parents who depend on abusive disciplinary behavior do not encourage their young children to communicate with their peers (Howes, Cicchetti, Toth, & Rogosch, 2000), to make close relationships (Parker & Herrera, 1996), and abused young children tend to be unwanted or mistreated by their peers (Bolger, Patterson, & Kupersmidt, 1998). Abused young children tend to view the world as malicious or unfair (Freeddenfeld, Ornduff, & Kelsey, 1995). In summary, when children experience a high level of caregiver sensitivity, they tend to develop better socioemotional peer and maternal relationships, and when children experience a lower level of caregiver sensitivity, they tend to develop lower levels of socioemotional adjustment.

## **2.2 Attachment and Self: Socioemotional Development**

### **2.2.1 Attachment**

Attachment theory can be used to explain the connections that are found between caregiver sensitivity and young children's socioemotional development. Bowlby (1969) and Ainsworth (1973) suggested that the quality of caregiver-young child interactions are the primary contributions to the construction of the young children's internal working models of self. Jay Belsky, a prominent attachment researcher, defined internal working models as "affectively-laden mental representations of self, other, and of relationships, derived from interactional experiences, which function [outside of conscious awareness] to direct attention and organize memory in a way that guides interpersonal behavior and the interpretation of social experience" (Belsky & Pensky, 1988, p. 198). Based on the interactions that young children experience with their caregivers, especially during their first three years of life, children extract assumptions and expectations about their worthiness and competence and about others' availability and supportiveness that serve as an unconscious "lens," or cognitive filter, through which the young child views himself/herself, others, and relations with others.

An extensive body of research has shown that how a caregiver responds to a child's needs and expectations and how a child's needs are met leads to four distinct attachment patterns: secure, insecure-

avoidant, insecure-ambivalent (Bowlby, 1988), and disorganized (Main & George, 1985). The attachment classifications of children are assessed using the Strange Situation paradigm, developed by Mary Ainsworth and her colleagues (McAdams, 1994). See Table 2 for a description of children’s attachment classifications, the corresponding attachment behaviors of mothers over time, and children’s behaviors in the Strange Situation.

Table 2

Children’s Attachment Classification, Attachment Behaviors of Mother over Time, and Children’s Behaviors in the Strange Situation

Attachment Classification	Mother’s Behaviors Over Time	Children’s Behaviors in Strange Situation
Secure	Responds to child’s needs promptly, appropriately and consistently; encourages exploration and is used by her child as a secure base by which to do so.	Protests mother’s departure but is easily and quickly consoled upon return; accepts mother’s affection and attention, uses mother as secure base.
Insecure-Ambivalent	Inconsistent, ranging from appropriate to neglectful, tends to be under-stimulating; cannot serve as secure base due to child’s preoccupation with mother’s availability.	Unhappy at mother’s departure, but may display reluctance and even anger toward her return; may show warmth to stranger.
Insecure-Avoidant	Little to no response to child’s distress; encourages exploration and discourages crying, typically shows hostility; may be preoccupied with an inappropriate level of “independence”	If no signs of distress at mother’s exit, continues play and no response to her return; if distressed, refuses to be consoled or soothed by mother
Disorganized	Inconsistent, intrusive, confused and unstable in role and boundaries with child, possibly abusive	Displays lack of coping strategy by exhibiting a mixture of behaviors



A child with a secure attachment explores freely while the mother is present and although the child is upset when the mother departs, (s)he is easily soothed upon her return. A child with an insecure-avoidant attachment may not explore regardless of the presence of the mother and when upset, the child refuses to be soothed by the mother or may ignore her. A child with an insecure-ambivalent attachment hesitates about exploration and becomes very distressed when the mother exits. When she returns, the child shows ambivalence about allowing the mother to soothe, but seeks proximity to her. The disorganized attachment category has been developed to categorize the originally unclassifiable children whose behaviors did not fit in any of the three original categories.

Securely attached children tend to have sensitively available, affectionate, and concerned caregivers, and are believed to construct a working model of the self as worthy, capable, and valuable (Bowlby, 1969). Sensitive caregivers read accurately and respond appropriately to their young children's cues, and the children construct working models of the self that are coherent and that view themselves as competent, independent, and worthy (Ainsworth, 1979). Insecurely attached children tend to have rejecting, unavailable and unconcerned caregivers, and are believed to construct a working model of the self that sees the self as unworthy, incapable, and invaluable. Insensitive caregivers tend to misread young children's cues, signals, needs, and demands, or respond to them inappropriately, and the children construct working models of the self that are less coherently structured, and that consider themselves as incapable, and invaluable.

A caregiver's lack of attunement may also lead to a young child's insecure working model of the self (Crittenden, 1988, 1990). In contrast, a caregiver's overattunement is argued to be a type of "emotional theft" because the caregiver stresses how the young child *should* feel and not how the young child really feels (Stern, 1985). Consequently, the young child's feelings are concealed rather than communicated.

Alternatively, securely attached young children display higher levels of self-esteem and self-confidence in comparison with insecurely attached young children (Sroufe, 1990). Securely attached children portray themselves in optimistic terms in comparison with ambivalently attached young children who portray themselves in pessimistic terms (Cassidy, 1990).

Building on the foundation of attachment theory, research has found that the quality of caregiving, especially caregiver sensitivity, influences the development of what is referred to as the self-system (Harter, 1999). Object-relation theorists, for example Winnicott (1958), Mahler (1967, 1968), Erikson (1950), and Kohut (1977), argue that sensitive parents increase their young children's self-evaluations. They argue that the quality of the communication between young children and their caregiver has an influence on young children's self-development, that caregivers who respond positively to young children's requirements tend to have more confident young children, and that caregivers who leave their young children alone after they have responded appropriately to their requirements tend to have young children with a secure and encouraging sense of self.

Crittenden (1990) and Cassidy (1990) argue that securely attached children, in comparison with insecurely attached young children, can connect to their memory systems easier and can accept both their appealing and unappealing characteristics. They can talk with their caregivers about the causes of their bad behavior more openly, and consequently, they evaluate their self more logically (Cassidy, 1990). On the other hand, the avoidantly attached children connect to their memory systems with difficulty, probably because some features of the true self are held out of consciousness.

Authoritative parents (Baumrind, 1967) tend to have young children with higher self-esteem, probably because they are tolerant, loving, and concerned. They assist their young children in behaving properly, they use positive disciplinary practices (such as induction and reasoning), they talk with their young children about the motives behind the children's inappropriate behavior, and they tend to accept their young children's points of view. Affectionate, warm and reliable interactions between the parents and their young children lead to a positive effect on the young children's self-representations and self-esteem (Feiring & Taska, 1996). The characteristics of authoritative parents are consistent with the parenting practices of parents of securely attached young children.

Dysfunctional families have a great impact on the development of young children's sense of self. Their effects may be analogous to insensitive caregiving effects because the parents tend to negatively evaluate their young children, which affects the young children's internal working model (Briere, 1992;

Fischer & Ayoub, 1994; Harter, 1998b; Herman, 1992; Terr, 1990). For example, young children from alcoholic or abusive families display lower self-esteem (Feiring & Taska, 1996; Harter, 1998b; Putnam, 1993).

Theorists have suggested that the development of young children's "true self" and "false self" are the consequences of the differences in their parents' caregiving style. For instance, the caregiver "who loves the child for who he is and not for what (s)he wants him to be," tends to have a child with a true-self (Deci & Ryan, 1995). On the other hand, the caregiver who depreciates the child's true feelings tends to have a child with a false-self (Deci & Ryan, 1995). Abusive caregivers are argued to inhibit the development of children's true selves (Harter, 1998b) and thus, the children learn to display a socially pleasing false self so that they can meet the needs and wishes of the caregivers.

The degree of differentiation in socialization may have an impact on the self-evaluations in girls opposed to boys. Caregivers have a tendency to give more negative feedback to girls than to boys (Lewis, Alessandri, & Sullivan, 1992; Dweck & Leggett, 1988), and girls have a tendency to feel guiltier and experience more shame and failure than do boys (Alessandri & Lewis, 1993). Girls show lower expectations for success and seem to deal with failure better than boys by assuming personal responsibility (Dweck & Leggett, 1988). The degree of differentiation in socialization may have an impact on young children's later perceptions of peer acceptance and maternal acceptance.

In summary, a sensitive, supportive, and nurturing caregiver, who is more likely to have securely attached children, will tend to raise children with more favorable images of self and more positive self-evaluations. The rejecting and punitive caregiver, who is more likely to have insecurely attached children, will tend to raise children with a more unfavorable image of self and more negative self-evaluations. When caregivers display higher levels of sensitivity and responsiveness toward their children, they tend to have more socio-emotionally competent children who exhibit more exploratory behaviors. On the other hand, caregivers who display lower levels of sensitivity and responsiveness tend to have children with lower levels of social and emotional adjustment. Caregiving style may influence the behaviors and interactions that the child exhibits in his interactions with his/her peers or mother, and therefore it is plausible that

caregiver sensitivity and child-perceived acceptance will play a role in his/her socioemotional development. The degree to which the interactions between the caregiver and the young child are positively attuned and responsive, described as the level of sensitivity, impacts the security of attachment within a dyad and the security of the IWM formed in the child. Aspects of sensitive caregiving, such as positive, responsive interactions and positive feedback, are considered to be contributory to the development of later perceptions of peer acceptance and maternal acceptance. The finding of the research discussed above suggests that there is a relationship between caregiver sensitivity and children's later peer acceptance and also a relationship between caregiver sensitivity and children's later maternal acceptance. Cumulative caregiver sensitivity during the first three years of life provides a model by which the child will view himself/herself, events, and interactions with others. Cumulative caregiver sensitivity has an impact on the security of the IWM the child has formed. Thus, cumulative caregiver sensitivity in the early years of life may influence the child's later perceptions of peer acceptance and maternal acceptance.

## CHAPTER 3: METHOD

The purpose of the study was to investigate the relationship between the sensitivity of young children's multiple caregivers during the child's first three years of life and the children's later perceptions of peer and maternal acceptance. The proposed study was a relational one, and contributes to the body of knowledge that is related to children's perceptions of both maternal acceptance and peer acceptance by exploring the possible relationship with the young children's earliest caregiving experiences. The data to measure the relationship between caregiver sensitivity and children's later perceptions of peer acceptance and maternal acceptance were collected during an earlier longitudinal study, the Baton Rouge Early Care and Education Study (BRECES; see Pierce & Benedict, 2007, for a full description of methods).<sup>1</sup>

### 3.1 BRECES Longitudinal Study

During the BRECES study, 60 female caregivers at eight child care centers had been videotaped for 30 minutes during inside free play with the infants and toddlers who were in their classrooms. A single coder, trained by one of the primary investigators, had coded the videotapes of the interactions between the caregivers and children using the Caregiver Interaction Scale (CIS, Arnett, 1989). The interactions that were captured on the videotapes were not isolated to the caregiver and a single child; rather, each caregiver was videotaped for 30 consecutive minutes interacting with all children with whom she came in contact. The interactions, therefore, were scored as a representation of the caregiver's general level of sensitivity.

The CIS consists of 26 items scored on a 4-point Likert-type scale that ranges from *not at all* to *very much*, and that are designed to measure 4 subscales: *sensitivity* (10 items), *harshness* (9 items), *detachment* (4 items), and *permissiveness* (3 items) (See Appendix A). The *harshness*, *detachment*, and *permissiveness* scores were reverse coded and, together with the sensitivity scores, were summed for a total CIS score to measure the caregiver sensitivity construct for each caregiver. The caregiver's total CIS score was used as the child's caregiver sensitivity measure at any of the 6 age-ranges for which the caregiver was the primary caregiver, a process that is explained more fully in the Results chapter.

## **3.2 Present Study**

### **3.2.1 Participants**

The pool of potential participants for the present study initially included the young children whose parents and caregivers had participated in BRECES. During and after the collection of the data for the BRECES study, the children's sequential classroom placements had been followed by contacting their centers every 6 months (in January and August), and by recording the identity of their current caregivers. At the beginning of the current project therefore, the investigators had a record for each child that potentially included the names of each child's caregivers, up to age 36 months. Each child's caregiver sequence record potentially contained caregiver information for 6 age ranges: 0 to 6 months, 6 to 12 months, 12 to 18 months, 18 to 24 months, 24 to 30 months, and 30 to 36 months. However, because the children had entered child care at different ages, and some children had left child care before the age of 36 months or data collection had ceased prior to the child's 36-month birthday, not every child's caregiver sequence record included caregiver information at all 6 possible age ranges. Additionally, not all caregivers had participated in BRECES, and the data base did not include sensitivity measures for the non-participating caregivers. Only those children for whom the researchers had measures of caregiver sensitivity for a minimum of 18 months, that is, a minimum of 3 sequential age ranges, were included in this study; for example, caregiver sensitivity data at 0 to 6 months, at 6 to 12 months, and at 12 to 18 months, or caregiver sensitivity data at 12 to 18 months, 18 to 24 months, and 24 to 30 months.

Fifty-seven children met the inclusion criteria. Several steps were taken to locate the 57 children. First, the researchers attempted to contact the families by phone, and successfully contacted 54 of the families. Second, each of the 54 families was sent a letter and a consent form. Twenty-six families returned signed consent forms. Finally, interviews were scheduled and conducted with the 26 families (see Appendix B for IRB approval and Appendix C for consent form).

- Description of the Young Children. The demographic variables for the young children include their gender, race, the child care center attended, the number of unique caregivers, the months of caregiver-sensitivity data, and the age at time of

testing. There were 10 boys and 16 girls. Twenty five of the children were European-American, and one was Asian-American. The 26 children had been in seven different child care centers while they were between the ages of 0 to 3 years old. The largest number of children at any one child care center was 7 and the least number of children in any one child care center was 1. The mean number of unique caregivers was 2.5 with a range of 1 to 4 caregivers; 2 children had had one caregiver, 12 children had had two caregivers, 10 children had had three caregivers, and 3 children had had four caregivers. The ages of the 26 children at the time they were interviewed ranged from 5- to 8-years old. Eight of the children were in kindergarten, and 18 were in the first or the second grade.

- Caregivers Demographic Characteristics. The 26 children who were interviewed had experienced 32 unique caregivers during their first 36 months in child care.

Demographic data were available for 30 of the caregivers. All of the caregivers were female. Ten of the caregivers were European-American, 19 were African-American, and 1 was Asian. One of the caregivers was single, never married, 18 were in their first marriage, 5 were remarried, 4 were divorced, 1 was living with a partner, and 1 was widowed. The caregivers were distributed among 7 daycare centers. Twenty-five of the caregivers held the title of *teacher*, 4 held the title of *teacher assistant*, and 1 held the title of *teacher aide*. Two caregivers reported their level of training as currently working on the 12-hour state-required training, 12 caregivers reported having received their 12-hour required training, 3 caregivers reported currently working on a CDA (child development associate) certification, 5 caregivers reported having received a CDA certification, 1 caregiver reported having received a 2-year associate degree, and 6 caregivers reported having received a 4-year college degree. The mean number of years that the caregivers had worked in child care was 12 and ranged from 1 to 32 years. The ages of the 30 caregivers at the time the children were

in their rooms ranged from 22- to 59- years old. Four of the caregivers had been in their 20's, 10 in their 30's, 11 in their 40's, and 5 in their 50's.

- **Caregiver Sensitivity Measures.** The number of unique caregivers for each child's 6 potential age-ranges under consideration varied. Recall that the identity of each child's current caregiver had been recorded at 6- month intervals, referred to in the Results section as snapshots, throughout the phase of the study during which the children were in child care (up to 36 months). There were 5 different caregivers at interval one (i.e., 0 to 6 months), 10 different caregivers at interval two, 15 different caregivers at interval three, 16 different caregivers at interval four, 14 different caregivers at interval five, and 14 different caregivers at interval six. The 32 caregivers' individual sensitivity scores ranged from 8 to 15, out of a possible range of 4 to 16, with a mean of 12.6, and a standard deviation of 2.08.

### **3.3 Interview Procedures**

Arrangements to interview the children in their homes were made over the phone. Three female students majoring in Family, Child and Consumer Sciences were trained to administer the interview instrument, the Pictorial Scale of Perceived Competence and Social Acceptance (PSPC, Harter & Pike, 1980). A single interviewer visited each child's home and was introduced to the children by their parents. Verbal assent was obtained from the children at the time of the interview. The child was asked if (s)he would like to go with the interviewer for about 15 minutes and look at some pictures. The interviewer administered the PSPC following the authors' instructions.

### **3.4 Measures of Constructs**

#### **3.4.1 Perceptions of Social and Emotional Acceptance**

The children's perceptions of their social and emotional acceptance were assessed with the peer acceptance subscale and the maternal acceptance subscale of the PSPC (Harter & Pike, 1984). The items were presented as 24 picture plates (see Appendix D and Appendix E for examples), and separate sets of picture plates were used for boys and for girls. There are two versions of the PSPC: one for



preschool/kindergarten children and one for first and second graders (see Appendix F). Subscale reliability was assessed by the authors by employing coefficient  $\alpha$  that provides an index of internal consistency. The reliability of each individual subscale fell within the range of .75 - .89 (Harter & Pike, 1984). The reliability of the total scale, all 24 items, is in the mid- to high .80s. All versions of the PSPC require the child to make a forced choice in the following manner. The child is shown a plate with two pictures (see again Appendix D and Appendix E) that each depicts a child engaged in the same activity (one on the left, and one on the right). Below each picture is a large circle and a small circle (total of 4 circles per plate). The investigator reads a brief statement about each child in the picture, and the child is asked to pick the child who is *most like them*, and then to indicate, by pointing to the appropriate circle, whether that child is *a lot like them* (the big circle), or *a little like them* (the smaller circle). The child's choice is coded in the form of a score from 1 (for the least perceived competent choice) to 4 (for the most perceived competent choice). For example, each boy was presented with 2 pictures that were described in the following manner: *This boy has pretty many friends to play games with* (investigator pointed to the boy on left), and *This boy doesn't have a lot of friends to play games with* (investigator pointed to the boy on right). If the boy chose the smaller circle on the left, that is, he is *a little like* the boy who *has pretty many friends*, he or she received a score of 3. If the boy indicated that he was *a little like* the boy on the right who *doesn't have a lot of friends*, he received a score of 2, and if he was *a lot like* that boy, he or she received a score of 1 (see Appendix F for the items in the subscales).

- Perceived Peer Acceptance. The scores for the following six items of the PSPC were summed to assess peer acceptance for the preschool/kindergarten (P-K) age group: *has lots of friends, stays overnight at friends, has friends to play games with, has friends on the playground, gets asked to play with others, and eats dinner at friends' house*. Four items – *has lots of friends, has friends to play games with, has friends on the playground, gets asked to play with others* -- were also used to assess peer acceptance for the first/second grades (1-2) age group. On the first/second grade version, two preschool-kindergarten items, *staying overnight at friends* and *eating*

*dinner at friends' house, were replaced with others share their toys and others sit next to you.*

- Perceived Maternal Acceptance. The scores for the following six items of the PSPC were summed to assess maternal acceptance for the preschool/kindergarten (P-K) age group: *mom smiles, mom takes you places you like, mom cooks favorite foods, mom reads to you, mom plays with you, and mom talks to you.* Four items – *mom takes you places you like, mom cooks favorite foods, mom reads to you, and mom talks to you* - were also used to assess maternal acceptance for the first/second grades (1-2) age group. On the first/second grade version, the two preschool-kindergarten items, *mom smiles* and *mom talks to you*, were replaced with *mom lets you eat at friends* and *mom lets you stay overnight.*

### **3.4.2 Cumulative Caregiver Sensitivity**

Because the interest of the present study was the relationship of a child's history of caregiver sensitivity across multiple caregivers, that is, the possible effect of different levels or different patterns of caregiver sensitivity that each child had experienced, it was necessary to derive a measure of cumulative caregiver sensitivity for each child. That is, the sequential sensitivity scores for each of the child's individual caregivers needed to be transformed into a single profile or score, in order to compare the cumulative sensitivity that each child had experienced with that experienced by the other children. A cumulative sensitivity score for each child was derived using two research paradigms: visual analysis and statistical analysis.

### **3.5 Predicted Connections**

We reasoned that attachment theory was applicable to the relationship between the cumulative sensitivity of young children's multiple caregivers during the young child's first three years of life and the children's later perceptions of both peer and maternal acceptance, and thus predictions could also be made about the perceived peer acceptance and the perceived maternal acceptance. It was predicted that both perceived peer acceptance and perceived maternal acceptance would be high when caregiver sensitivity had

been consistently high, would be medium when caregiver sensitivity had changed from high to low or from low to high, and would be low when caregiver sensitivity had been consistently low (see Table 3).

Table 3

Expected Relationships between Early Cumulative Caregiver Sensitivity and Children's Later Perceptions of Peer and Maternal Acceptance

	Cumulative Sensitivity			
	Consistently High	High to Low	Low to High	Consistently Low
Perceived peer acceptance	high	medium	medium	low
Perceived maternal acceptance	high	medium	medium	low

The rationale for applying the attachment theory to possible relationship between cumulative caregiver sensitivity early in life and young children's later perceived peer and maternal acceptance relies on the concept of the internal working model. The internal working model is an unconscious and powerful conceptual structure that guides attention and organizes memory in such a manner as to confirm existing beliefs about oneself, others, and the relationships through the guiding of attention to, and interpretation of, interactional social experiences (Belsky & Pensky, 1988). The internal representations of the self, a component of the internal working model, estimate the degree to which one is worthy, capable, and supported. The internal representations of the attachment figure, another component of the internal working model, predict how responsive, available, and supportive (s)he is. Throughout their childhood, children begin to develop models of how the world, others, and oneself can be expected to behave (Bartholomew & Horowitz, 1991). A child with a secure attachment, who has learned to see himself as worthwhile and relationships as rewarding, will behave in a manner that is consistent with his internal representations of self. (S)he will exhibit less inhibited and more explorative behaviors and will tend to develop rewarding and

worthwhile relationships with others, thus increasing others' perception of him as a strong and well adapted child. The securely attached child has a positive internal working model that influences his perceptions and experiences in such a way that the child's mind will focus on information that is congruent with his internal working model. On the other hand, a child with an insecure attachment, who has learned to see himself as difficult, incompetent, and ineffective, will also behave in a manner that is consistent with his internal representations of himself. He may refuse to attempt new tasks, and assume his own uselessness, thereby reinforcing others' perception of him as a helpless and poorly adapted child. The insecurely attached child has a self-negating internal working model that will influence his perceptions and experiences in such a way that the child's mind will focus on information that is congruent with his internal working model and discard information that is contrary.

The degree to which a child's internal working model is secure or insecure impacts the way that the child sees himself and similarly affects his perceptions of peer and maternal acceptance in such a way that they are consistent with the view that the child holds of himself, especially with respect to competence and worthiness. This is the reason for which one would expect peer and maternal acceptance to be high when caregiver sensitivity has been consistently high. Likewise, consistently low caregiver sensitivity would be associated with low perceptions of peer acceptance and maternal acceptance than if the child had experienced a higher level of caregiver sensitivity. The internal working model is also the mechanism by which a child's caregiver's sensitivity in the first 36 months and later peer and maternal acceptance at age 6 are mediated. Those experiences in a child's early years construct the internal working model that will guide perception of peer and maternal acceptance and filter experiences when the children are in grade school.

## **Footnotes**

<sup>1</sup>The following description of the methods used in the BRECES study and in the present study was written in collaboration with Jenna Watson, a master's student in Human Ecology whose thesis research examined possible connections between cumulative caregiver sensitivity and children's later cognitive development.

## CHAPTER 4: RESULTS

The purpose of the study was to examine the relationship between children's early caregiver sensitivity history and their later perceptions of peer acceptance and children's early caregiver sensitivity history and their later perceptions of maternal acceptance. Data were collected from 26 children and were analyzed using two methods: visual analysis and statistical analysis. The means, standard deviations, ranges, and bivariate correlations of the primary variables are shown in Table 4.

Table 4

Descriptive Statistics and Bivariate Correlations for the Primary Variables (N=26)

Primary Variables	Correlations with:						
	M	SD	Actual Range	PA	MA	S	I
Number of unique caregivers	2.50	0.8	1 to 4	0.34	0.25	-0.14	-0.19
Number of snapshots	4.23	1.14	3 to 6	0.27	0.38*	0.28	0.27
Age in months at testing	85.38	14.11	61 to 105	-0.22	-0.32	-0.29	-0.26
Peer Acceptance (PA)	3.09	0.58	2 to 4		0.55**	-0.08	0.10
Maternal Acceptance (MA)	2.82	0.53	2 to 4			0.03	-0.06
Slope (S, rate of change in caregiver sensitivity)							0.99***
Intercept (I, average level of caregiver sensitivity)							

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

The bivariate correlations of the five primary variables, number of unique caregivers, number of snapshots, age at testing in months, peer acceptance, and maternal acceptance revealed that neither number of unique caregivers, number of snapshots (i.e., intervals), nor age at testing was significantly related with peer

acceptance or maternal acceptance. The strong positive correlation between perceived peer acceptance and maternal acceptance,  $r = 0.55, p < 0.01$ , was not unexpected because it was in accordance with Harter's findings in PSPC (1984).

4.1 Visual Analysis

For each of the 6-month age intervals, that is, for each snapshot, the scores for each child's individual caregiver's sensitivity were plotted, providing graphical data that represent each child's caregiver sensitivity pattern for visual analysis. The graphs of each child's caregiver sensitivity history were created to provide visual profiles by which to group and assess differences among the children. After the visual inspection of the 26 graphs, three groups were created based on the cumulative level of sensitivity that the child had experienced: consistently high level of sensitivity (see Figure 1), consistently low level of sensitivity (see Figure 2), and inconsistent level of sensitivity (see Figure 3).

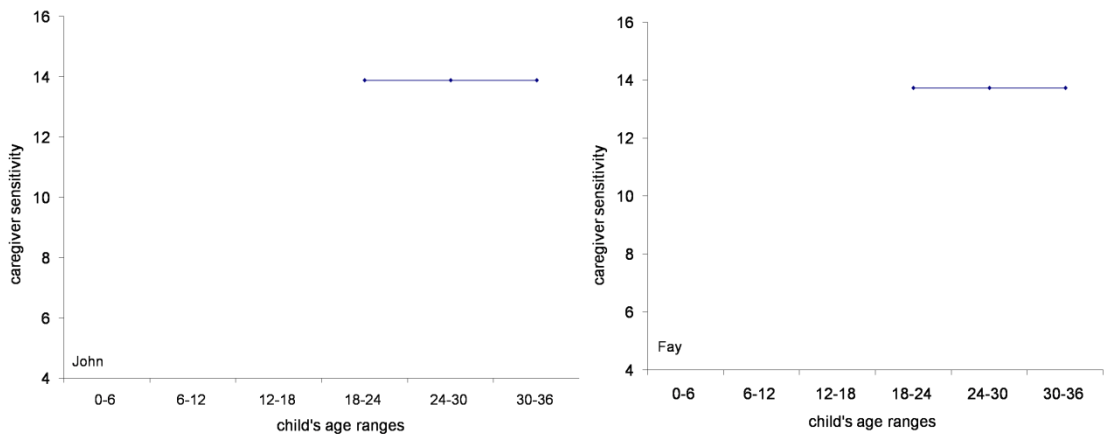
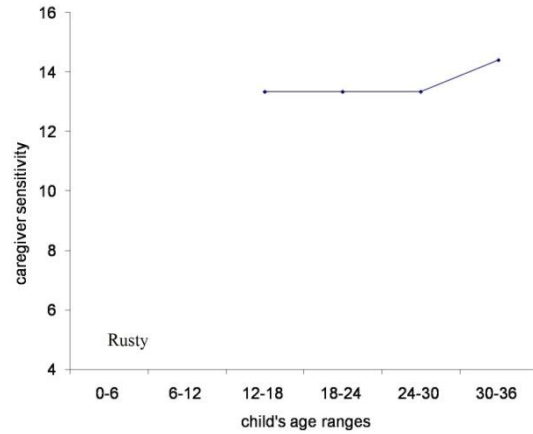
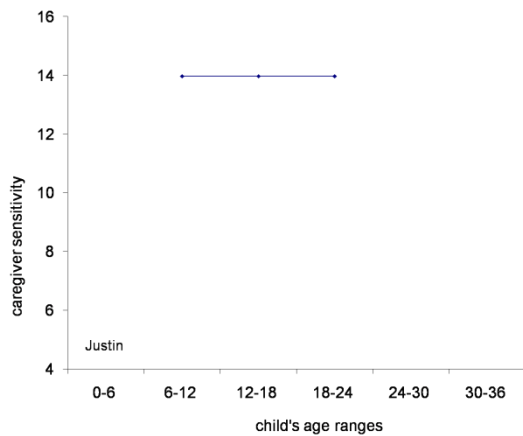
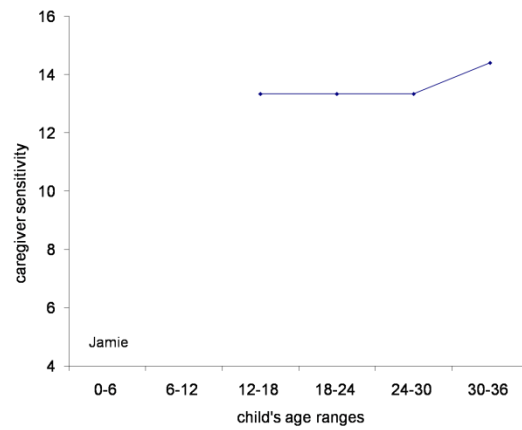
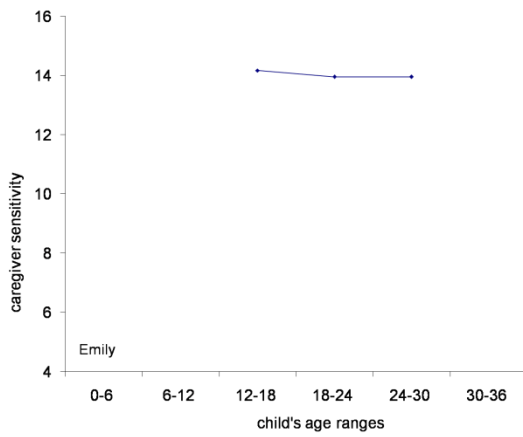
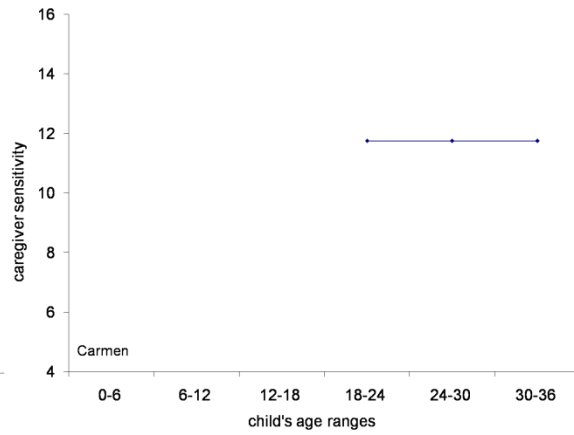
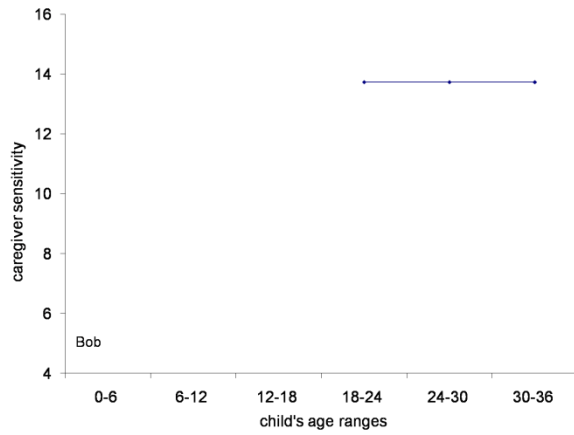
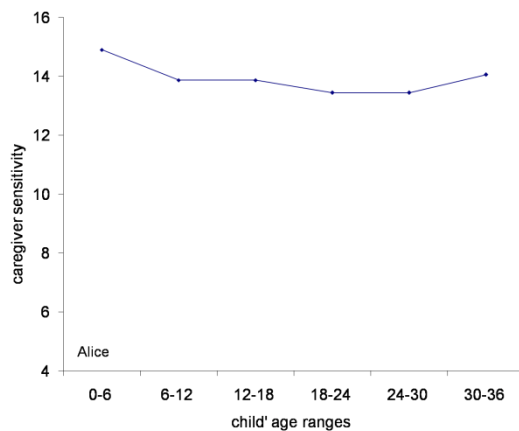
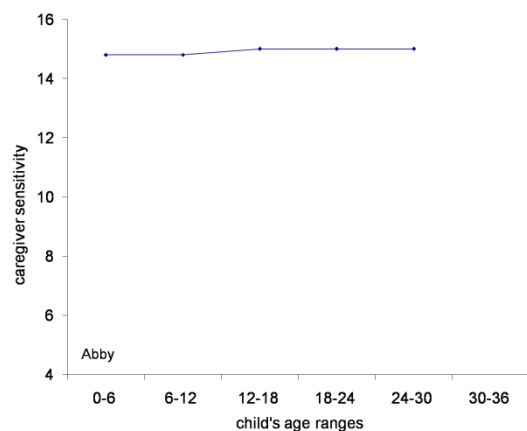
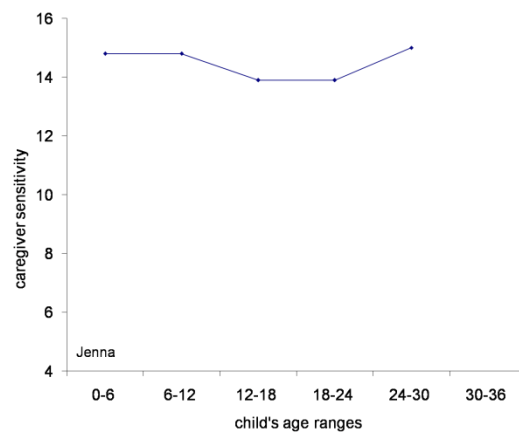
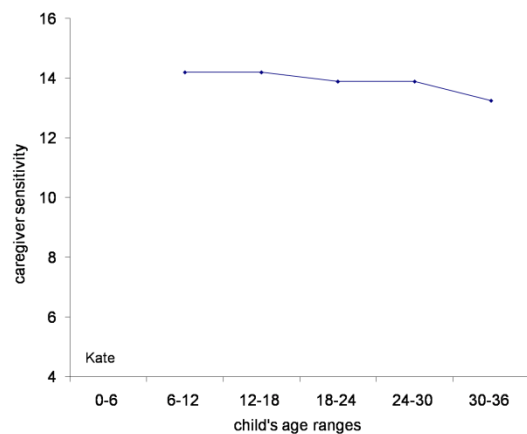
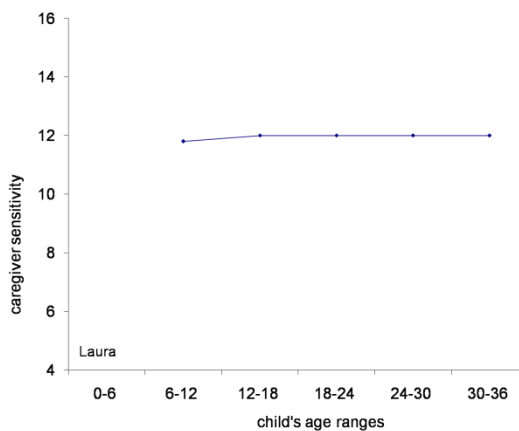
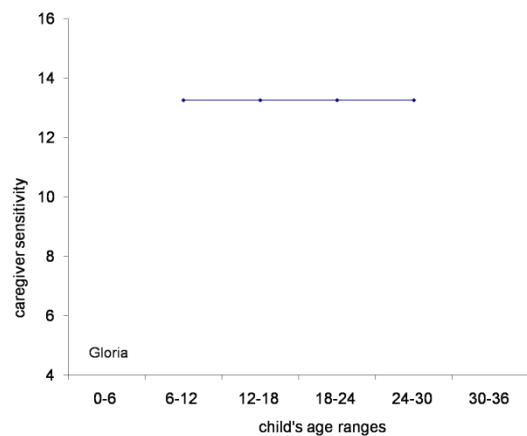


Figure 1. Profiles of 16 Caregiver Sensitivity Histories Classified as Consistently High.

(fig. 1 cont'd)



(fig. 1 cont'd)





(fig. 1 cont'd)

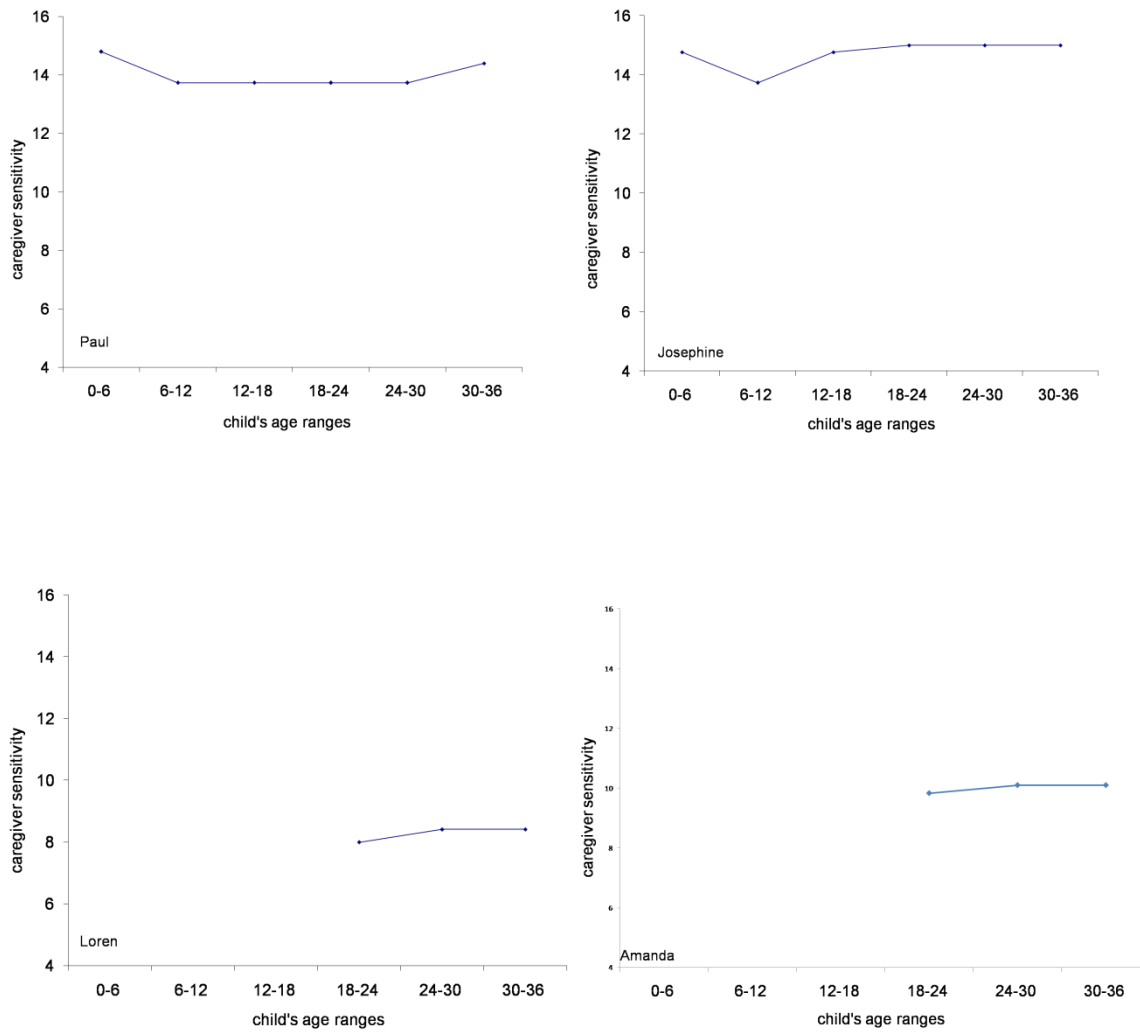


Figure 2. Profiles of Two Caregiver Sensitivity Histories Classified as Consistently Low.

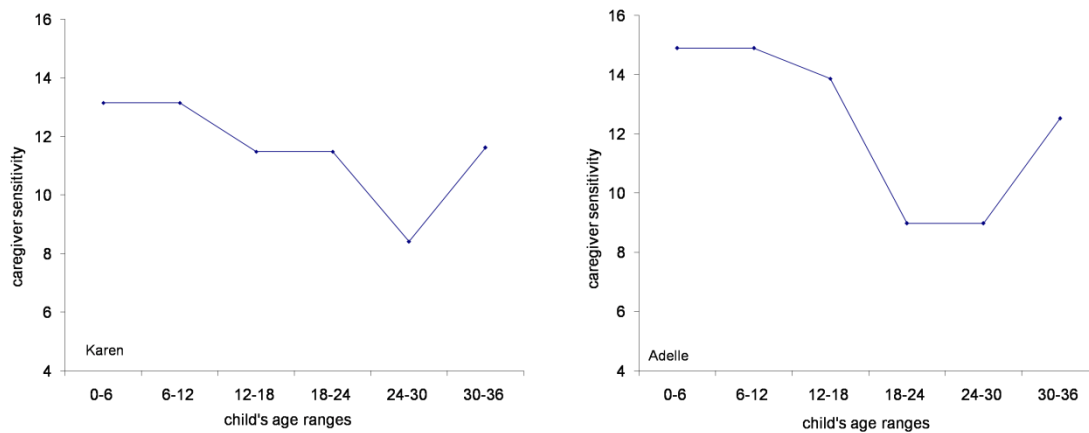
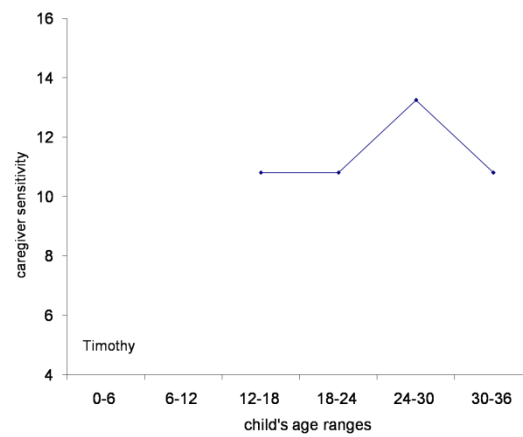
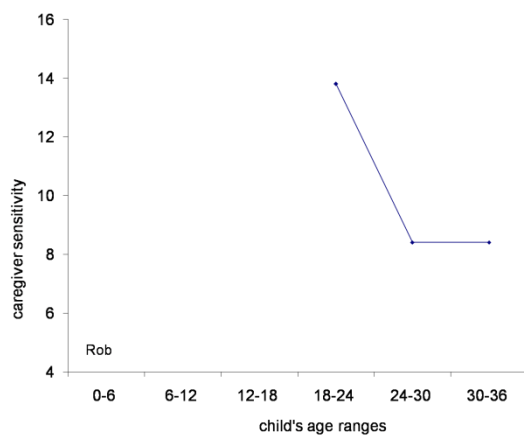
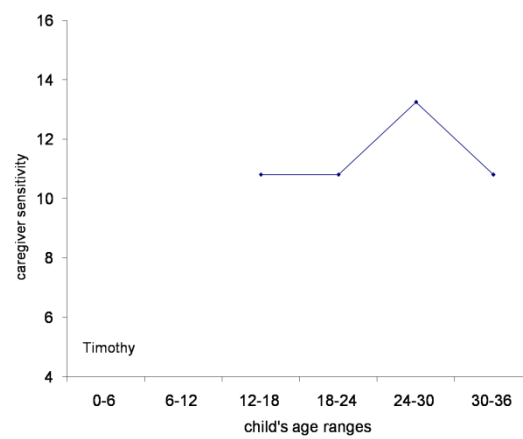
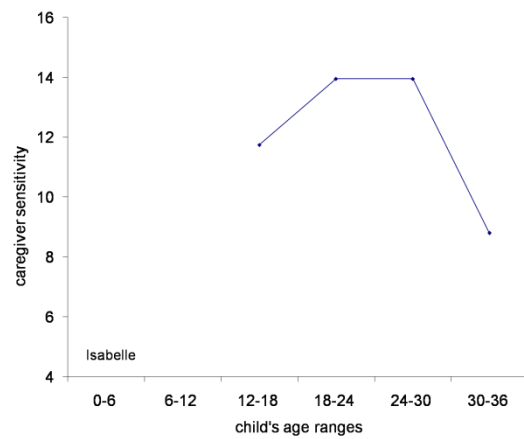
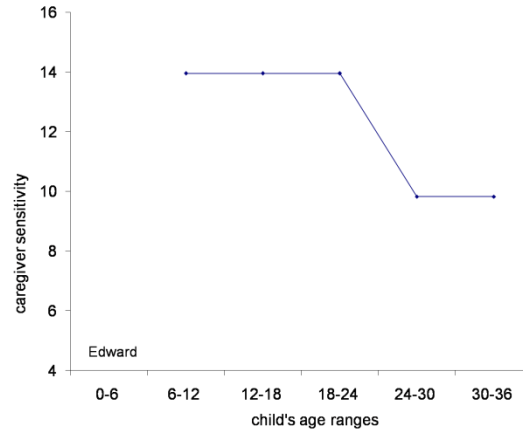
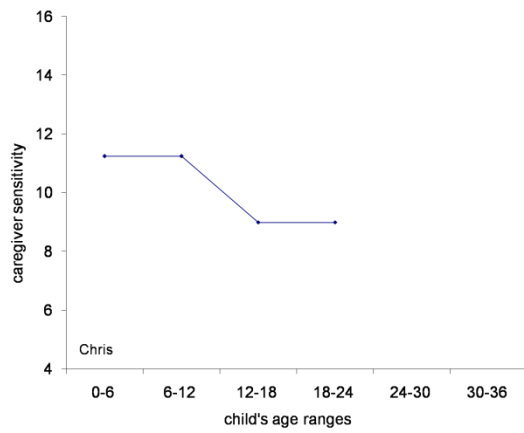
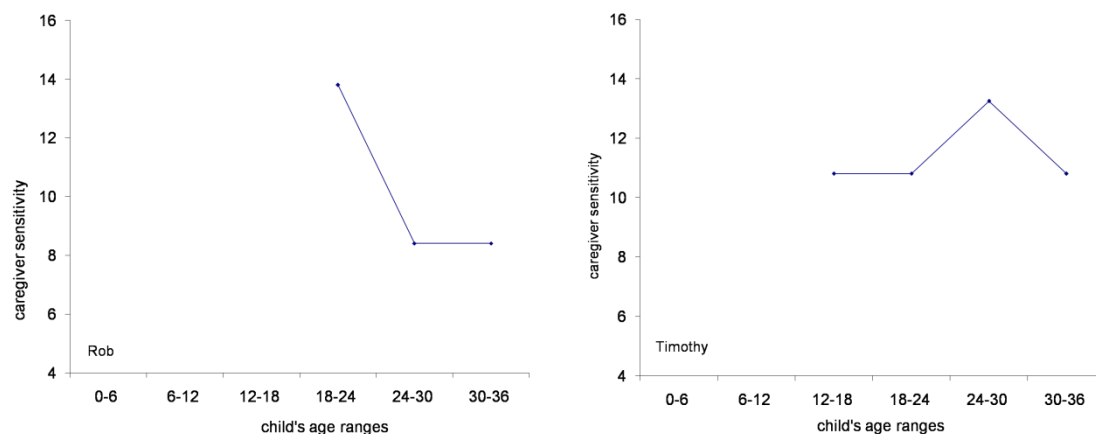


Figure 3. Profiles of 10 Caregiver Sensitivity Histories Classified as Inconsistent

(fig. 3 cont'd)



(fig. 3 cont'd)



A cumulative pattern of sensitivity was determined to be consistently high when the CIS scores on the graph remained at or above 11 (the approximate statistical midpoint between the actual scores which were from 8.0 to 15.0 as well as the visual midpoint, see Figures 1-3), consistently low when the CIS scores on the graph remained below 11, and inconsistent when the CIS scores split the boundary score of 11 between high sensitivity and low sensitivity. There were 16 children whose caregiver sensitivity pattern was consistently high, 2 children whose caregiver sensitivity pattern was consistently low, and 10 children whose caregiver sensitivity pattern was inconsistent. Because of the low number of children in the consistently low group, they were included with the inconsistent group for analysis. The grouping together of the low group with inconsistent group is justifiable on the following basis: the outcomes that are expected in children whose caregiver sensitivity pattern is consistently low is believed to be similar to the outcomes expected in children whose caregiver sensitivity pattern is inconsistent because both low levels of sensitivity and inconsistent levels of sensitivity are associated with insecure attachments and insecure internal working models.

#### 4.2 Description and Relationships among the Primary Variables within Two Sensitivity Groupings

There were 16 children who fell into the category of having received consistently *high* caregiving sensitivity. The mean number of unique caregivers was 2.4. The mean number of the children's snapshots, i.e., the number of age intervals for which caregiver sensitivity data was available, was 4.3 snapshots. The

mean score for perceived peer acceptance was 3 and ranged from 2 to 4. The mean score for perceived maternal acceptance was 2.8 and ranged from 2 to 4.

There were 10 children who fell into the category of having received consistently *low* or *inconsistent* caregiving sensitivity. The mean number of unique caregivers was 2.7. The mean number of the children's snapshots was 4.1 snapshots. The mean score for perceived peer acceptance was 3 and ranged from 2 to 4. The mean score for perceived maternal acceptance was 2.9 and ranged from 2 to 4 (see Table 5).

Table 5

Means and Standard Deviations for the Children Who Received Consistently High Caregiver Sensitivity (n = 16) and Those Who Received Consistently Low or Inconsistent Caregiver Sensitivity (n = 10)

	Consistently High	Consistently Low or Inconsistent
Number of unique caregivers	2.38 (0.72)	2.70 (0.95)
Number of snapshots	4.31 (1.14)	4.10 (1.20)
Age at testing in months	83.13 (13.78)	89.00 (14.60)
Perceived peer acceptance	3.03 (0.67)	3.20 (0.42)
Perceived maternal acceptance	2.76 (0.51)	2.92 (0.59)

A series of *t*-tests were conducted to test for possible differences between the means of the two groups (consistently *high* versus consistently *low* or *inconsistent*) for the five variables of interest: number of unique caregivers, number of snapshots, age at testing, peer acceptance, and maternal acceptance. The *t*-

tests revealed no statistically significant differences between the means for the two groups on any of the five variables.

### **4.3 Statistical Analysis**

To complement the visual analysis of each child's cumulative history of caregiver sensitivity, a statistical analysis was also performed. Hierarchical linear modeling (HLM) was used to estimate the average level of caregiver sensitivity that each child had experienced over the first 3 years of life and the rate of change in the level of caregiver sensitivity that each child had experienced over the first 3 years of life. Hierarchical linear modeling (HLM), a type of growth curve modeling, can be used to describe the developmental trajectory of a given variable, in this case, caregiver sensitivity (Spieker & Lawson, 1999). A particular advantage of HLM is that the procedure is quite flexible in that the number and timing of observations may differ across subjects and the number and spacing of data points may vary across time (Bryk & Raudenbush, 1987). HLM analyses offer parsimonious, interpretable, and continuous summary scores of repeated measures (Bryk & Raudenbusch, 1992).

HLM was used in the present study to describe the quality of cumulative caregiver sensitivity over the first 3 years of life by calculating two scores: an intercept, which represents the average level of caregiver sensitivity over time, and a slope, which represents the estimated rate of change in caregiver sensitivity over time (Tran & Weinraub, 2006). To test the hypothesis that the average level of caregiver sensitivity and the rate of change in caregiver sensitivity are related to the measures of later self-perceptions, correlations were estimated between the intercept scores, the slope scores, and the scores of self-perceptions of peer acceptance and maternal acceptance. Additional correlations were estimated between the intercept scores, slope scores, and the number of unique caregivers, the number of snapshots, and the age at testing. None of the correlations between the caregiver sensitivity variables and the perceived acceptance variables reached the level of statistical significance at the .05 level (please refer back to Table 4). The significant correlation between the intercept scores and the slope scores is a standard finding because they are statistically dependent. The strong positive correlation between perceived peer acceptance and maternal acceptance was expected in reference to Harter's PSPC.

## **CHAPTER 5: DISCUSSION AND CONCLUSIONS**

The present study investigated the relationship between the sensitivity of young children's multiple caregivers during the children's infant and toddler period, and the children's later self-perceptions of peer and maternal acceptance. A review of the literature found that young children's high quality child care experiences are a strong predictor of later social and emotional development (NICHD-ECCRN, 2005; Peisner-Feinberg et al., 1999; Phillips et al., 1987). The characteristics of the child care experience (quality, amount of time spent in child care, and continuity of care arrangements) were identified as an important influence on children's later perceived peer acceptance and maternal acceptance.

The study found no statistical relationship between early caregiver sensitivity and children's later perceptions of peer and maternal acceptance. One possible explanation for the lack of significant relationships between these variables is that there is no measure of the children's internal working model. The measure of cumulative caregiver sensitivity may not have been strong enough to provide an indicator of the power of children's internal working model. The measure of cumulative caregiver sensitivity that was used was independent of the children's internal working model. However, the author thinks that more differences would be noted in future studies if several steps were made and thus caregiver sensitivity might be found to be related to children's later perceptions of peer acceptance and maternal acceptance. The first improvement would be to measure both cumulative caregiver sensitivity and the children's internal working model. The second improvement necessary would be to increase the sample size. The present study gathered data on only 26 participants, which weakened the power of the statistical analyses, but a larger sample size would result in stronger correlations among the constructs because larger samples tend to minimize the probability of errors, maximize the accuracy of population estimates, give the study greater power, and increase the generalizability of the results. Thus, the confidence level of the result is higher and more representative. The third step would be to use multiple instruments to assess the caregiver sensitivity. Although the instrument used to assess caregiver sensitivity is assumed to be valid, measures were taken only once per caregiver while she interacted with an entire group of children. The caregiver sensitivity could be assessed as the caregiver interacted with the specific child being studied. A further study may use

more than one scale to measure sensitivity and use scales that measure child care center quality, amount of time spent in child care, and continuity of care arrangements to produce a more general ecological representation of the child's environment. The three improvements would greatly enhance the study. The author thinks that a study conducted with the three mentioned improvements would be able to meaningfully describe the relation between children's early caregiver sensitivity history and their later perceptions of peer acceptance and maternal acceptance.

Although our research on the relationship between caregiver sensitivity and children's later peer acceptance, respectively, children's later maternal acceptance indicated no correlation between these constructs, we believe that the area of study is still important and may yield important findings. The author believes that an increase in sample size, a more accurate assessment of caregiver sensitivity, an assessment of children's internal working model, and adopting an ecological perspective of children's environment will increase the validity of the measure of caregiver sensitivity across multiple caregivers during the child's three years of life and find results that are more congruent with the existing research.

## REFERENCES

- Ainsworth, M. (1973). The development of infant-mother attachment. In B. Caldwell & H. Ricciuto (Eds.), *Review of child development research* (Vol. 3, pp. 1-94). Chicago: University of Chicago Press.
- Ainsworth, M.D.S., Blehar, M., Waters, E., & Wall, S. (1978). *Patterns of attachment*. Hillsdale, NJ: Erlbaum.
- Ainsworth, M. (1979). Infant-mother attachment. *American Psychology*, 34, 932-937.
- Ainsworth, M.D.S., & Bell, S. (1970). Attachment, exploration, and separation: Illustrated by the behavior of one-year olds in a strange situation. *Child Development*, 41, 49– 67.
- Alessandri, S. M., & Lewis, M. (1993). Parental evaluation and its relation to shame and pride in young children. *Sex Roles*, 29, 335-343.
- Arnett, J. (1989). Caregivers in day care centers: Does training matter? *Journal of Applied Developmental Psychology*, 10, 541-552.
- Bartholomew, K., & Horowitz, L.M. (1991). Attachment styles among young adults: A test of a four category model. *Journal of Personality and Social Psychology*, 61 (2), 226-244.
- Baumrind, D. (1967). Child care practices anteceding three patterns of preschool behavior. *Genetic Psychological Monographs*, 75, 43-88.
- Baumrind, D. (1977). Some thoughts about child rearing. In S. Cohen & T. J. Chomsky (Eds.), *Child development: Contemporary perspectives*. Itasca, IL: F.E. Peacock.
- Belsky, J. (2001). Developmental risks associated with early child care. *Journal of Child Psychology and Psychiatry*, 42, 845-859.
- Belsky, J., & Pensky, E. (1988). *Relationships within families. Mutual influences*. Oxford: Calendar Press.
- Bolger, K. E., Patterson, C. J., & Kupersmidt, J. B. (1998). Peer relationships and self-esteem among children who have been maltreated. *Child Development*, 69, 1171-1197.
- Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. London: Hogarth.
- Bowlby, J. (1982). *Attachment and loss: Vol.2. Attachment* (2nd ed.). New York: Basic Books.
- Bowlby, J. (1988). *A secure base: Clinical applications of attachment theory*. Routledge. London.
- Briere, J. (1992). *Child abuse trauma. Theory and treatment of the lasting effects*. Newbury Park, CA: Sage.
- Bryk, A.S., & Raudenbush, S.W. (1987). Application of hierarchical linear models to assessing change. *Psychological Bulletin*, 101, 147-158.



- Bryk, A. S., & Raudenbush, S. W. (1992). *Hierarchical linear models: Applications and data analysis methods*. Newbury Park, CA: Sage Publications.
- Campbell, S. B., Cohn, J. F., & Meyers, T. (1995). Depression in first time mothers: Mother infant interaction and depression chronicity. *Developmental Psychology*, 31, 349-357.
- Campbell, F. A., Ramey, C. T., Pungello, E., Sparlin, J., & Miller-Johnson, S. (2002). Early childhood education: Young adult outcomes from the Abecedarian Project. *Applied Developmental Science*, 6, 42-57.
- Cassidy, J. (1990). Theoretical and methodological considerations in the study of attachment and the self in young children. In M. T. Greenberg, D. Cicchetti, & E. M. Cummings (Eds.), *Attachment in the preschool years: Theory, research, and intervention* (pp. 87-120). Chicago: University of Chicago Press.
- Clarke-Stewart, K. A. (1987). Predicting child development from child care forms and features: The Chicago study. In D. A. Phillips (Ed.), *Quality in child care: What does research tell us?* Washington, DC: National Association for the Education of Young Children.
- Clarke-Stewart, K. A., Gruber, C. P., & Fitzgerald, L. M. (1994). *Children at home and in day care*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Cohn, J. F., Campbell, S. B., & Ross, S. (1991). Infant response in the still-face paradigm at 6 months predicts avoidant and secure attachment at 12 months. *Development and Psychopathology*, 3, 367-376.
- Colletta, N. (1981). Social support and the risk of maternal rejection by adolescent mothers. *Journal of Family Issues*, 4, 191-197.
- Crittenden, P. M. (1988). Relationships at risk. In J. Belsky & T. Nezworkei (Eds.), *Clinical implications of attachment* (pp. 136-174). Hillsdale, NJ: Erlbaum.
- Crittenden, P. M. (1990). Internal representational models of attachment relationships. *Infant Mental Health Journal*, 11, 259-277.
- Crockenberg, S. C. (2003). Rescuing the baby from the bathwater: How gender and temperament (may) influence how child care affects child development. *Child Development*, 74, 1034-1038.
- Cryan, J. R. (1987). The banning of corporal punishment in child care, schools and other educative settings in the United States. *Childhood Education*, 63, 146-153.
- Cryer, D. (1999). Defining and assessing early childhood program quality. In A. W. Heston (Journal Ed.) & S. W. Helburn (Vol. Ed.), *The annals of the American Academy of Political and Social Science: The silent crisis in U.S. child care* (pp. 39-55). London: Sage.
- Cryer, D., Hurwitz, S., & Wolery, M. (2000). Continuity of caregiver for infants and toddlers in center-based child care: Report on a survey of center practices. *Early Childhood Research Quarterly*, 15(4), 497-514.

- Cummings, E. M., & Cicchetti, D. (1990). Towards a transactional model of relations between attachment and depression. In M.T. Greenberg, D. Cicchetti, & E. M. Cummings (Eds.), *Attachment in the preschool years: Theory, research, and intervention* (pp. 339-372). Chicago: University of Chicago Press.
- Deci, E. L., & Ryan, R. M. (1995). Human autonomy: The basis for true self-esteem. In M. H. Kernis (Ed.), *Efficacy, agency, and self-esteem*. (pp. 31-46). New York: Plenum.
- Dettling, A. C., Parker, S. W., Lane, S. K., Sebanc, A. M., & Gunnar, M. R. (2000). Quality of care and temperament determine whether cortisol levels rise over the day for children in full-day child care. *Psychoneuroendocrinology*, 24, 819-836.
- Dix, T., Ruble, D. N., & Zambarano, R. J. (1989). Mothers' implicit theories of discipline: Child effects, parent effects, and the attribution process. *Child Development*, 60, 1373-1391.
- Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, 95, 256-273.
- Elicker, J., & Fortner-Wood, C. (1995). Research in review. Adult-child relationships in early childhood settings. *Young Children*, 51(1), 69-78.
- Erikson, E. H. (1950). *Childhood and society* (2<sup>nd</sup> ed.). New York: Norton.
- Feiring, C., & Taska, L. S. (1996). Family self-concept: Ideas on its meaning. In B. Bracken (Ed.), *Handbook of self-concept* (pp. 317-373). New York: Wiley.
- Fischer, K. W., & Ayoub, C. (1994). Affective splitting and dissociation in normal and maltreated children: Developmental pathways for self in relationships. In D. Cicchetti & S. Toth (Eds.), *Rochester Symposium on Developmental Psychopathology: Disorders and dysfunctions of the self* (Vol. 5, pp. 149-222). Rochester, NY: University of Rochester Press.
- Freedendfeld, R. N., Ornduff, S. R., & Kelsey, R. M. (1995). Object relations and physical abuse: A TAT analysis. *Journal of Personality Assessment*, 64, 552-568.
- Greenstein, T. (1993). Maternal employment and child behavioral outcomes: A household economics analysis. *Journal of Family Issues*, 14, 323-354.
- Harter, S. (1998b). The effects of child abuse on the self-system. In B. B. Rossman & M. S. Rosenberg (Eds.), *Multiple victimization of children: Conceptual, developmental, research, and treatment issues* (pp. 147-170). New York: Haworth Press.
- Harter, S. (1999). *The construction of the self. A developmental perspective*. New York: The Guilford Press.
- Harter, S., & Pike, R. (1984). The pictorial scale of perceived competence and social acceptance for young children. *Child Development*, 55, 1969-1982.
- Harwood, R. (1988). Parental stress and the young infant's needs. In E. Zigler & M. Frank (Eds.), *The parental leave crisis* (pp. 55-76). New Haven, CT: Yale University Press.

- Herman, J. (1992). *Trauma and recovery*. New York: Basic Books.
- Hesse, E., & van IJzendoorn, M. (1998). Parental loss of close family members and propensities towards absorption in offspring. *Developmental Science*, 1, 299-305.
- Howes, P., Cicchetti, D., Toth, S. L., & Rogosch, F. R. (2000). Affective, organizational, and relational characteristics of maltreating families: A systems perspective. *Journal of Family Psychology*, 14, 95-110.
- Howes, C., & Stewart, P. (1987). Child's play with adults, toys, and peers: An examination of family and child care influences. *Developmental Psychology*, 23, 423-430.
- Howes, C., & Hamilton, C. E. (1992). Children's relationships with child care teachers: Stability and concordance with maternal attachments. *Child Development*, 63, 879-892.
- Izard, C. E., Fantauzzo, C. A., Castle, J. M., Haynes, O. M., Rayias, M. F., & Putnam, P. H. (1995). The ontogeny and significance of infants' facial expressions in the first 9 months of life. *Developmental Psychology*, 31, 997-1013.
- Jacobson, J., & Wille, D. (1986). The influence of attachment pattern on developmental changes in peer interaction from the toddler to the preschool period. *Child Development*, 57, 338- 347.
- Kohut, H. (1977). *The restoration of the self*. New York: International Universities Press.
- Kontos, S. (1994). The ecology of family day care. *Early Childhood Research Quarterly*, 9, 87-110.
- Lamb, M. E. (1998). Nonparental child care: Context, quality, correlates. In W. Damon, I. E. Sigel, & K. A. Renninger (Eds.), *Handbook of child psychology, Volume 4: Child psychology in practice* (5<sup>th</sup> ed., pp. 73-134). New York: Wiley.
- Lewis, M., Allessandri, S. M., & Sullivan, M. W. (1992). Differences in shame and pride as a function of children's gender and task difficulty. *Child Development*, 63, 630-638.
- Maccoby, E. E. (1998). *The two sexes: Growing up apart, coming together*. Cambridge, MA: Belknap.
- Mahler, M. S. (1967). On human symbiosis and the vicissitudes of individuation. *Journal of the American Psychoanalytic Association*, 15, 740-763.
- Mahler, M. S. (1968). *On human symbiosis and the vicissitudes of individuation: Vol. 1. Infantile psychosis*. New York: International Universities Press.
- Main, M., & George, C. (1985). Response of abused and disadvantaged toddlers to distress in agemates: A study in the daycare setting. *Developmental Psychology*, 21, 407-412.
- Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood and adulthood: A move to the level of representation (pp. 66-104). *Monographs of the Society for Research in Child Development*, 50, (1 – 2, Serial No. 209).

- Marshall, N. L. (1991). *Empowering low-income parents: The role of child care*. Paper presented at the meeting of the Society for Research in Child Development, Seattle, WA.
- McAdams, D. P. (1994). Can personality change? Levels of stability and growth in personality across the life span. In T. F. Heatherton & J. L. Weinberger (Eds.), *Can personality change?* (pp. 299–313). Washington, DC: APA Books.
- National Association for the Education of Young Children. (1991). *Accreditation criteria and procedures of the National Academy of Early Childhood Programs*. Washington, DC: Author.
- National Institute of Child Health and Human Development (NICHD) Early Child Care Research Network. (2005). Predicting individual difference in attention, memory, and planning in first graders experiences at home, child care, and school. *Developmental Psychology*, 41(1), 99-114.
- National Institute of Child Health and Human Development (NICHD) Early Child Care Research Network. (2007). *Testing a series of causal propositions relating time spent in child care to children's externalizing behavior*. Manuscript submitted for publication.
- Olson, S. L., Bates, J. E., & Bayles, K. (1984). Mother-infant interaction and the development of individual differences in children's cognitive competence. *Developmental Psychology*, 20, 166-179.
- Parke, R. D., & Ladd, G. W. (Eds.). (1992). *Family-peer relationships: Modes of linkage*. Hillsdale, NJ: Erlbaum.
- Parker, J. G., & Herrera, C. (1996). Interpersonal processes in friendship: a comparison of abused and nonabused children's experiences. *Developmental Psychology*, 32, 1025-1038.
- Peisner-Feinberg, E. S., & Burchinal, M. R. (1997). Concurrent relations between child care quality and child outcomes: The study of cost, quality, and outcomes in child care centers. *Merrill-Palmer Quarterly*, 43, 451-477.
- Peisner-Feinberg, E. S., Burchinal, M. R., Clifford, R., Culkin, M., Howes, C., & Kagan, S. (2001). The relation of preschool child-care quality to children's cognitive and social developmental trajectories through second grade. *Child Development*, 72, 1534-1553.
- Peisner-Feinberg, E. S., Burchinal, M. R., Clifford, R. M., Yazejian, N., Byler, P., & Rustici, J. (1999). *The children of the cost, quality, and outcomes study go to school: Technical report*. Chapel Hill: University of North Carolina, Frank Porter Graham Child Development Center.
- Phillips, D., McCartney, K., & Scarr, S. (1987). Child-care quality and children's social development. *Developmental Psychology*, 23, 537-543.
- Pierce, S. H., & Benedict, J. H. (2007). Predicting caregivers' sensitivity to infants and toddlers in child care centers. Submitted for publication.
- Putnam, F. W. (1993). Dissociation and disturbances of the self. In D. Cicchetti & S. Toth (Eds.), *Rochester Symposium on Developmental Psychopathology: Disorders and dysfunctions of the self* (Vol. 5, pp. 251-266). NY: University of Rochester Press.

- Raikes, H. (1993). Relationship duration in infant care: Time with a high-ability teacher and infant-teacher attachment. *Early Childhood Research Quarterly*, 8, 309-325.
- Reynolds, A. (2000). *Success in early childhood interventions: The Chicago child-parent centers*. Lincoln: University of Nebraska.
- Rogosch, F. A., & Cicchetti, D. (1994). Illustrating the interface of family and peer relations through the study of child maltreatment. *Social Development*, 3, 291-308.
- Scher, A., & Mayseless, O. (2000). Mothers of anxious/ambivalent infants: Maternal characteristic and child care context. *Child Development*, 71, 1629-1639.
- Sroufe, L. A. (1990). An organizational perspective on the self. In D. Cicchetti & M. Beeghly (Eds.), *The self in transition: Infancy to childhood* (pp. 281-308). Chicago: University of Chicago Press.
- Sroufe, L. A., Egeland, B., Carlson, E. A., & Collins, W. A. (2005). *The Development of the person: the Minnesota study of risk and adaptation from birth to adulthood*. New York: Guilford Press.
- Stern, D. (1985). *The interpersonal world of the infant*. New York: Basic Books.
- Suwalsky, J., Zaslow, M., Klein, R., & Rabinovitch, B. (1986). *Continuity of substitute care in relation to infant-mother attachment*. Paper presented at the annual meetings of the American Psychological Association, Washington, DC.
- Terr, L. (1990). *Too scared to cry*. New York: Basic Books.
- Teti, D. M., & Gelfand, D. M. (1991). Behavioral competence among mothers of infants in the first year: The mediational role of maternal self-efficacy. *Child Development*, 62, 918-929.
- Tran, H., & Weinraub, M. (2006). Child care effects in context: Quality, stability, and multiplicity in nonmaternal child care arrangements during the first 15 months of life. *Developmental Psychology*, 42, (3), 566-582.
- Tronick, E. Z., Cohn, J., & Shea, E. (1986). The transfer of affect between mothers and infants. In T. B. Brazelton & M. W. Yogman (Eds.), *Affective development in infancy* (pp. 11-25). Norwood, NJ: Ablex.
- van IJzendoorn, M. H., Goldberg, S., Kroonenberg, P. M., & Frenkel, O. J. (1992). The relative effects of maternal and child problems on the quality of attachment: A meta-analysis of attachment in clinical samples. *Child Development*, 63, 840-858.
- van IJzendoorn, M. H., Tavecchio, L. W. C., Riksen-Walraven, J. M. A., Schipper, J. C., de Gevers Deynoot-Schaub, M., & Schaub, M. (2004). *Center day care in the Netherlands. What do we know about its quality and effects?* Paper presented at the biennial meeting of the International Society for the Study of Behavioral Development. Ghent, Belgium.
- Volling, B., & Feagans, L. (1995). Infant day care and children's social competence. *Infant Behavior and Development*, 18, 177-188.

- Votruba-Drzal, E., Coley, R. L., & Chase-Lansdale, P. L. (2004). Child care and low-income children's development: Direct and moderated effects. *Child Development*, 75(1), 296-312.
- Winnicott, D. W. (1958). *From pediatrics to psychoanalysis*. London: Hogarth Press.

**APPENDIX A: ITEMS IN THE CAREGIVER INTERACTION SCALE (ARNETT, 1984)  
CLUSTERED BY SUBSCALE**

Sensitivity (Subscale)	Harshness (Subscale)
1 Speaks warmly to the children	1 Places high value on obedience
2 Listens attentively when children speak to her	2 Seems critical of the children
3 Seems to enjoy the children	3 Speaks with irritation or hostility to the children
4 Encourages the children to try new experiences	4 Threatens children in trying to control them
5 Seems enthusiastic about the children's activities	5 Punishes the children without explanation
6 Pays positive attention to the children	6 Finds fault easily with children
7 Talks to children on a level they can understand	7 Prohibits many of the things that the children want to do
8 Exercises firmness when necessary	8 Expects the children to exercise self-control (e.g., to be undistruptive for group, teacher-led activities; to be able to stay in line calmly)
9 Encourages children to exhibit prosocial behavior (e. g., sharing, helping)	9 Seems unnecessarily harsh when scolding or prohibiting children
10 When talking to children, kneels, bends, or sits at their level to establish better eye contact	

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Detachment (Subscale)

Permissiveness (Subscale)

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1 Seems distant or detached from the children

1 When the children misbehave, explains the  
reason for the rules they are breaking

2 Spends considerable time in activity not  
involving interaction with the children

2 Doesn't try to exercise much control over  
the children

3 Doesn't seem interested in the children's  
activities

3 Doesn't reprimand children when they  
misbehave

4 Doesn't supervise the children very closely

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## APPENDIX B: BATON ROUGE EARLY CARE & EDUCATION STUDY PHASE II IRB APPROVAL DOCUMENT



**Institutional Review Board**  
203 B-1 David Boyd Hall  
Louisiana State University and A&M College  
Baton Rouge LA 70803

(225) 578-8692

FAX: 578-6792  
irb@lsu.edu

### INSTITUTIONAL REVIEW BOARD

#### ACTION ON PROTOCOL APPROVAL REQUEST

**TO:** Sarah Pierce  
School of Human Ecology

**FROM:** Robert C. Mathews  
Chair, Institutional Review Board for Research with Human Subjects

**DATE:** June 17, 2005

**RE:** IRB# 2530

**TITLE:** "Baton Rouge Early Care & Education Study: Phase II"

**New Protocol/Modification/Continuation:** N

**Review type:** Full ☐ Expedited ☒ **Review date:** 06/17/2005

**Risk Factor:** Minimal ☒ Uncertain ☐ Greater Than Minimal ☐

**Approved** ☒ **Disapproved** ☐

**Approval Date:** 06/17/2005 **Approval Expiration Date:** 06/17/2006

**Re-review frequency:** (annual unless otherwise stated) ☐

**Number of subjects approved:** 75

**By:** Robert C. Mathews, Chairman

#### PRINCIPAL INVESTIGATOR: PLEASE READ THE FOLLOWING – Continuing approval is **CONDITIONAL** on:

1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and LSU's Assurance of Compliance with DHHS regulations for the protection of human subjects\*
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins); notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.
7. Notification of the IRB of a serious compliance failure.
8. SPECIAL NOTE:

*\*All investigators and support staff have access to copies of the Belmont Report, LSU's Assurance with DHHS, DHHS (45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents in print in this office or on our World Wide Web site at <http://www.fas.lsu.edu/osp/irb>*

## **APPENDIX C: BATON ROUGE EARLY CARE & EDUCATION STUDY: PHASE II CONSENT FORM**

**\* RETURN THIS SHEET TO DR. PIERCE \***

The Baton Rouge Early Care and Education Study: Phase II

Dr. Sarah Pierce  
work: 578-1725  
home: 383-0509  
cell: 505-9267

School of Human Ecology  
LSU  
Baton Rouge, LA 70803  
email: [pierce@lsu.edu](mailto:pierce@lsu.edu)

1. Purpose of the study: To continue the examination of the effects of high-quality early care and education on infants that we began in 1999 (BRECES, Baton Rouge Early Care and Education Study: Phase I).
2. Participants: Children of families who have remained active in the BRECES study.
3. Performance sites: Children will be interviewed at their summer child care arrangements.
4. Procedures: Children will be asked to participate in two short "picture choosing" tasks, each of which takes about 15 minutes. First they will be shown line drawings of children, and asked to indicate which child is "most like them." Examples include drawings of children who are working puzzles, climbing trees, and looking at letters of the alphabet. Second, the children will be shown several pictures, given a vocabulary word, and asked to point to the picture that represents that word. The children's height and weight will also be measured.
5. Benefits: There are no expected immediate benefits to the participants, but the results will hopefully help professionals provide better early care.
6. Risks: There are no physical or psychological risks to the children or their families. No information is of a sensitive or clinical nature. The interviewers will be trained female undergraduate students who are majoring in early childhood education, and who are sensitive to young children's needs.
7. Participants' rights: Participation is voluntary; parents are free to withdraw their child from the study at any time.
8. Privacy: Data will be kept confidential unless release is legally compelled. Research records will include only an identification number after all the questionnaires and observations are complete. No names will be included on any final research records. All results will be reported as group averages. All information will be destroyed when it is no longer needed for the reporting of the research.
9. Release of information: The general findings of the study will be available to the participants when it is published. Information about individual families or children will not be available to parents, future teachers, or school systems.

**\* TURN OVER FOR SIGNATURE \***

(appendix continues)

**\* RETURN THIS SHEET TO DR. PIERCE \***

The study as been discussed with me to my satisfaction and all my questions have been answered to my satisfaction. I may direct additional questions regarding study specifics to the investigator, Dr. Pierce. If I have questions about subjects' rights or other concerns, I can contact Robert C. Mathews, Chairman, LSU Institutional Review Board, (225) 578-8692. I agree to participate in the study described above and acknowledge the researchers' obligation to provide me with a copy of this consent form if signed by me.

parent's signature

date

please print your name

relationship to child

phone number and times of day when we can reach you

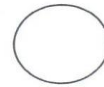
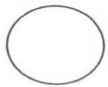
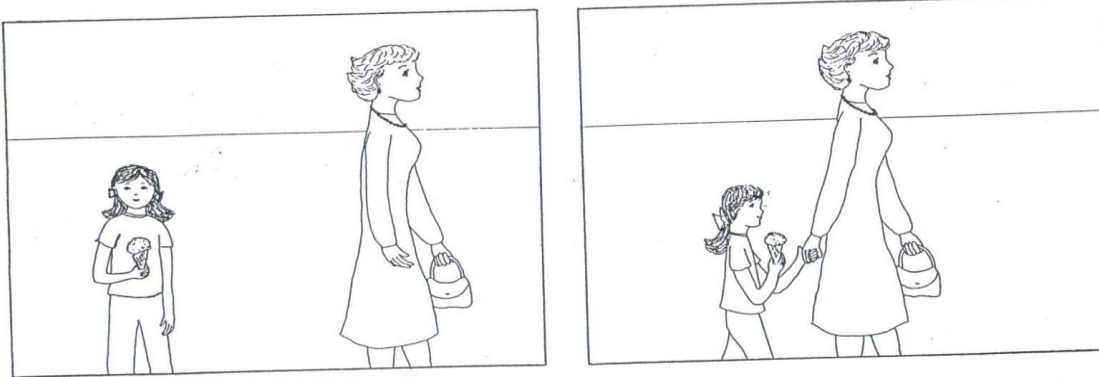
your mailing address

your email address if you have one

where your child is during the summer: please provide as much contact information as you can

child's name

**APPENDIX D: EXEMPLARY PICTURE PLATE FROM HARTER & PIKE (1980)**  
**PICTURE PLATE EIGHT: MATERNAL ACCEPTANCE SUBSCALE**



**Interviewer's Script and Scoring Protocol**

This girl's mom doesn't take her to very many  
places she likes to go.

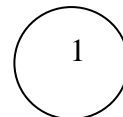
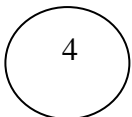
Does your mom take you to:

Not very many places    OR    A few places  
you like to go                      you like to go

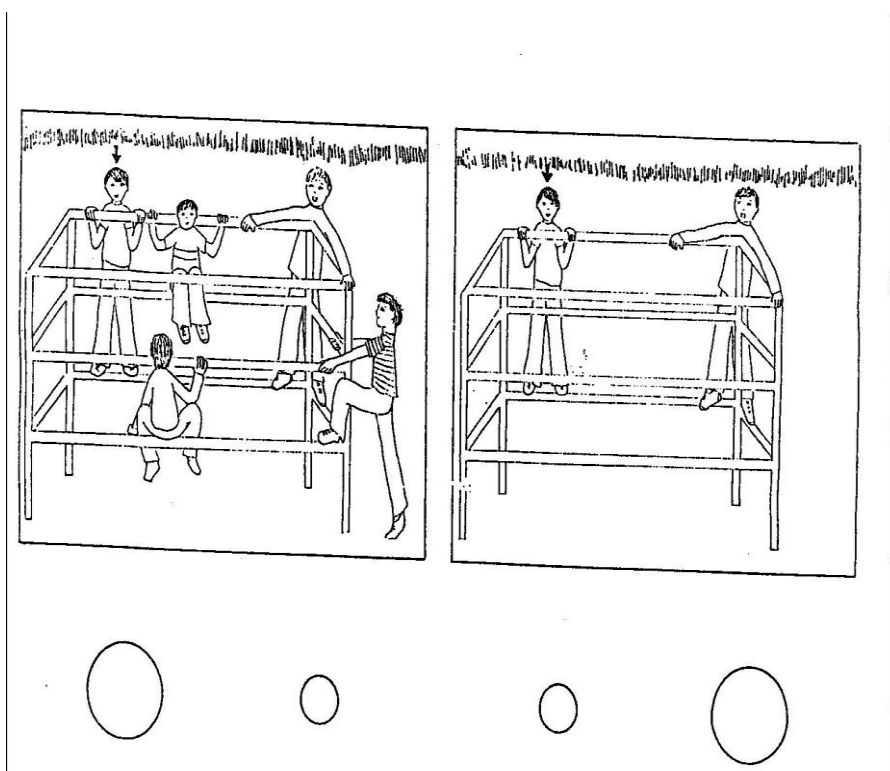
This girl's mom takes her to a lot of places  
she likes to go.

Does your mom take you to:

Pretty many places    OR    A whole lot of places  
you like to go                      you like to go



**APPENDIX E: EXEMPLARY PICTURE PLATE FROM HARTER & PIKE (1980)**  
**PICTURE PLATE FOURTEEN: PEER ACCEPTANCE SUBSCALE**



Interviewer's Script and Scoring Protocol

This boy has lots of friends to play  
with on the playground. Do you have:

This boy doesn't have very many friends to  
play with on the playground. Do you have:

Pretty many  
friends

OR

A whole lot  
of friends

Hardly any  
friends

OR

A few  
friends

4

3

2

1

**APPENDIX F: ITEMS FROM THE PICTORIAL SCALE OF PERCEIVED COMPETENCE  
AND SOCIAL ACCEPTANCE FOR YOUNG CHILDREN (HARTER & PIKE, 1980)**

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Peer Acceptance Subscale

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Has lots of friends*	Has lots of friends*
Stays overnight at friends	Others share their toys
Has friends to play games with*	Has friends to play games with*
Has friends on the playground*	Has friends on the playground*
Gets asked to play with others*	Gets asked to play with others*
Eats dinner at friends' house	Others sit next to you

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Maternal Acceptance Subscale

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Mom smiles	Mom lets you eat at friends
Mom takes you to places you like*	Mom takes you places you like*
Mom cooks favorite foods*	Mom cooks favorite foods*
Mom reads to you*	Mom reads to you*
Mom plays with you	Mom lets you stay overnight
Mom talks to you*	Mom talks to you*

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*Note:* Asterisk designates items common to both forms.

**VITA**

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Loredana’s work experiences include teaching as a special education teacher for visually impaired students six years in Moldova School for Visually Impaired Students in Tg. Frumos, Iasi, Romania, 2000-2006. As a graduate student, she worked in the family, child, and consumer sciences division as a research assistant.